

I claim:

1. A firewall for use in a power integrated network having a plurality of computer systems, the firewall comprising:

5 an input module that receives data addressed to a given computer system in the power integrated network;

a security module operatively coupled with the input module, the security module analyzing the data received by the input module to determine if the data can be forwarded to the given computer system; and

10 a power module operatively coupled with the security module and input module, the power module receiving power from the power integrated network to energize the security module and the input module.

15 2. The firewall as defined by claim 1 wherein the power integrated network implements principles of Power Ethernet.

20 3. The firewall as defined by claim 1 wherein the power module includes a power converter that converts power received from the power integrated network into a power level that can be used by the security module and the input module.

4. The firewall as defined by claim 1 further comprising an output module for forwarding the data to the given computer system.

25 5. The firewall as defined by claim 1 further comprising a policy server interface operatively coupled with the security module, the policy server interface communicating policy data with a policy server.

6. The firewall as defined by claim 1 wherein the power integrated network includes at least two computer systems coupled by a cable that transmits both data and power.

5 7. A computer cable for communicating a first computer system with a second computer system in a power integrated network, the cable comprising:  
a data channel for transmitting data between the first computer system and the second computer system;  
a power channel for transmitting power between the first computer  
10 system and the second computer system; and  
a firewall coupled with the data channel and the power channel, the firewall being energized by power received from the power channel.

15 8. The computer cable as defined by claim 7 wherein for bi-directional communication, the data channel includes at least one data wire.

9. The computer cable as defined by claim 7 wherein the power channel includes at least one power wire.

20 10. The computer cable as defined by claim 7 further comprising a power converter that converts power received from the power channel into a power level that is capable of energizing the firewall.

25 11. The computer cable as defined by claim 7 wherein the computer cable has two ends, the computer cable further comprising:  
a first coupler for coupling the first computer system with a first of the two ends of the computer cable; and

a second coupler for coupling the second computer system with a second of the two ends of the computer cable.

12. The computer cable as defined by claim 7 further comprising a  
5 containment layer circumscribing the data channel, the firewall, and the power channel.

13. A firewall for use in a power integrated network, the firewall comprising:  
10 the power integrated network;  
program code for analyzing the received data to determine if the data can be forwarded to the given computer system;  
a processor for executing the program code for receiving and the program code for analyzing, the processor being energized by the power integrated  
15 network.

14. The firewall as defined by claim 13 further comprising a power module  
that receives power from the power integrated network to energize the  
processor.  
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15. The firewall as defined by claim 14 wherein the power module includes a power converter for converting the power from the power integrated network to a power level that can be used to energize the processor.

25 16. The firewall as defined by claim 13 wherein the power integrated network implements principles of Power Ethernet.

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17. The firewall as defined by claim 13 further including a policy server interface for communicating with a policy server.

18. The firewall as defined by claim 13 wherein the power integrated network includes at least two computer devices that are coupled by a cable that communicates both data and power.

19. A power integrated network coupled with a specified network, the power integrated network comprising:

10 a plurality of computer systems;

a network firewall coupled between the power integrated network and the specified network;

a local firewall coupled to one of the computer systems, the local firewall being powered by the power integrated network, the local firewall preventing unauthorized access to the one computer system via the specified network, the local firewall preventing unauthorized access to the one computer system only.

20. The power integrated network as defined by claim 19 further comprising: a policy server coupled with the local firewall.

21. The power integrated network as defined by claim 19 wherein all of the computer systems in the power integrated network include a local firewall.

22. The power integrated network as defined by claim 19 wherein at least two of the computers in the network are coupled by a cable that communicates both data and power.

23. The power integrated network as defined by claim 19 wherein the power integrated network implements principles of Power Ethernet.

24. The power integrated network as defined by claim 19 wherein the  
5 specified network includes a public network.

25. A method of securing a given computer system within a power integrated network, the method comprising:

10 receiving power from the power integrated network;  
coupling a local firewall to the given computer system, the local firewall being configured to control access to the given computer system; and  
using the received power from the power integrated network to energize the local firewall.

15 26. The method as defined by claim 25 wherein the self-powering network includes a plurality of computer systems, at least one computer system in the network being coupled with the given computer system via a cable that transmits both data and power.

20 27. The method as defined by claim 25 wherein the power integrated network includes an interface to a second network, the method further comprising:  
coupling a network firewall to the interface to control access to the power integrated network.

25 28. The method as defined by claim 25 wherein the power integrated network implements principles of Power Ethernet.

29. The method as defined by claim 25 further comprising:

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